

Entomological Survey of Himalaya

Part XXVI. A Contribution to our Knowledge of the Geography of the High Altitude Insects of the Nival Zones from the North-West Himalaya

PART 2

BY

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(With nine text-figures)

[Continued from Vol. 58 (2) : 406]

COLEOPTERA

We have given some account of the distribution of Coleoptera from the NW. Himalaya in an earlier paper (99). The order represents about 49% of the total nival insect fauna (Table I; Fig. 3). About 190 species belonging to 18 families are so far known (Table II; Fig. 12).

Species endemism is 59%. Nearly 96% of the species are Palaearctic (Tables III and X); of these about 3% represent the Mediterranean elements. About 5% of the species extend to the Nearctic realm. Nearly half the species occur north of the crest line of the Great Himalaya.

Carabidae, Staphylinidae, Tenebrionidae and Curculionidae are the dominant families. Analysis of the faunal component elements is summarized in Table III and the percentage composition of the four dominant families in Table IV (Fig. 13).

The family Carabidae, with 84 species belonging to 27 genera, represents about 45.3% of the total nival Coleoptera above the timber line. Of these, 33 species (under 10 genera) occur above an elevation of 4000 m. above m.s.l. Nearly half the species are endemites. Of the endemic species, 4 fall under the genus *Amara*, 15 under *Bembidion*, 4 each under *Carabus* and *Cymindis*, and 2 under *Nebria*.

TABLE II

Analysis of the abundance of species in different families of nival Coleoptera

Serial No.	Family	No. of Species	Percentage in total nival Coleoptera
1.	Cicindelidae	..	1
2.	Carabidae	..	84
3.	Dytiscidae	..	7
4.	Hydrophilidae	..	7
5.	Histeridae	..	2
6.	Staphylinidae	..	32
7.	Cantharidae	..	1
8.	Meloidae	..	1
9.	Elateridae	..	1
10.	Coccinellidae	..	2
11.	Tenebrionidae	..	17
12.	Scarabaeidae	..	3
13.	Geotrupidae	..	1
14.	Aphodidae	..	1
15.	Rutelidae	..	2
16.	Cerambycidae	..	4
17.	Chrysomelidae	..	4
18.	Curculionidae	..	16
Total nival species		186	



Fig. 12. The nival Coleoptera from the north-west Himalaya.

The endemites *Bembidion pictum* (Fald.), *Bembidion hutchinsoni* Andr., *Bembidion irregulare* Net., *Bembidion ixion* Andr., *Bembidion*

TABLE III
Faunal elements of the nival Coleoptera

Serial No.	Family	Total Species	Endemites	Palaeartic		Oriental (Indo-Malayan)	Remarks
				Total	Medit.		
1.	Cicindelidae ..	1	—	1	1	—	2 spp. extend to Nearctic; 1 sp. wide-spread.
2.	Carabidae ..	84	44	81	3	4	
3.	Dytiscidae ..	7	4	7	—	—	
4.	Hydrophilidae ..	7	1	7	—	—	
5.	Histeridae ..	2	1	2	—	—	
6.	Staphylinidae ..	32	26	32	1	—	
7.	Cantharidae ..	1	—	1	—	—	
8.	Meloidae ..	1	—	—	—	1	
9.	Elateridae ..	1	—	1	—	—	
10.	Coccinellidae ..	2	—	2	—	—	
11.	Tenebrionidae ..	17	16	17	—	—	
12.	Scarabaeidae ..	3	—	3	—	—	
13.	Geotrupidae ..	1	1	1	—	—	
14.	Aphodidae ..	1	1	1	—	—	
15.	Rutelidae ..	2	1	2	—	—	
16.	Cerambycidae ..	4	1	4	—	—	
17.	Chrysomelidae ..	4	1	4	—	—	
18.	Curculionidae ..	16	12	14	—	—	
Total ..		186	109	180	5	5	
Percentage out of total 186 species..			58.8%	95.3%	—	4.1%	
Percentage of the Mediterranean elements in the total Palaeartic					3.0%		

TABLE IV

Percentage of the faunal component elements in the four dominant families of nival Coleoptera

Serial No.	Family	Total species	Endemites	Palaeartic		Indo-Malayan
				Total	Medit.	
1.	Carabidae ..	84	52.0	98.0	4.8	2.0
2.	Staphylinidae ..	32	81.2	100.0	3.1	—
3.	Tenebrionidae ..	17	94.0	100.0	—	—
4.	Curculionidae ..	16	75.0	87.5	—	12.5

ladas Andr., *Bembidion leve* Andr., and *Bembidion livens* Andr. are strictly localized in the area drained by R. Indus north of the

crest line of the Great Himalaya, and also mostly occur at elevations above 4000 m. *B. pictum* (Fald.), *B. hutchinsoni* Andr., *B. ladas* Andr., and *B. leve* Andr. are never found below an elevation of 4000 m. *B. hutchinsoni* Andr., found at 4734 m., represents at present the maximum altitude record in the genus *Bembidion* in the NW. Himalaya. Three species *B. algidum* Andr., *B. caporoacoi* Net., and *B. irregulare* Net. often descend below 3000 m. to within the fringe of the taiga.

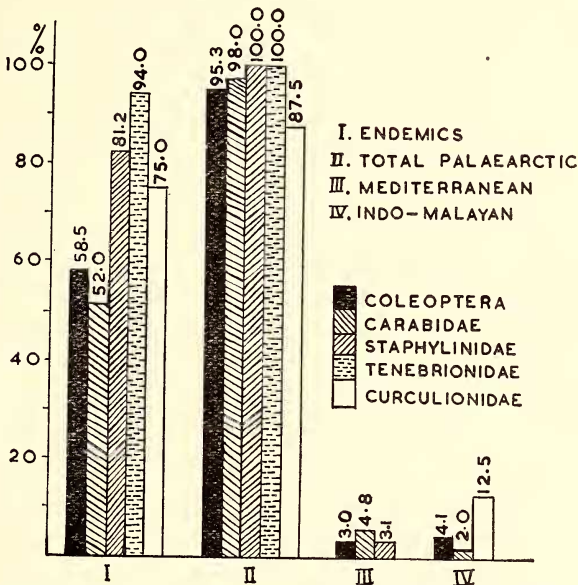


Fig. 13. The faunal elements of the nival Coleoptera from the north-west Himalaya.

Of the four endemic *Amara*, two species *ambigene* Bates (4267 m.) and *lamia* Andr. (3400-4664 m.) are also localized in the Indus drainage area. *Carabus (Imaibus) barysomus* (Bates), *Carabus (Imaibus) dardiellus granulisparsus* Bates, *Carabus (Imaibus) epipleuralis* Sem., and *Carabus (Imaibus) rostianus* Sem. are localized near the timber line in the area drained by R. Jhelum on the Pir Panjal Range and south of the main crest line of the Great Himalaya. *Cymindis alticola* Gebl., *Cymindis babaulti* Andr., and *Cymindis glabrella* Bates, found near an elevation of 3200 m., and *Cymindis rubriceps* Andr. found at an elevation of 5151 m., are localized in the Indus drainage area. Also localized in the same area is *Nebria limbiger a babaulti* Andr., occurring at an elevation of 4420 m. The typical form *Nebria limbiger a* Solsky, found at elevations ranging

from 4267 m. to 4541 m. in the Indus drainage area, is also known from Kumaon Himalaya, Pamir, Alai, Kokand, and China (Fig. 14). Outside the NW. Himalaya, we have the interesting record of the occurrence of the three subspecies *Nebria limbigera alaiensis* Glas. from Alai and Pamir, *Nebria limbigera picta* Sem., and *Nebria limbigera kandsptisa* Glas. from Pamir. Among the other endemic Carabidae, the monotypic *Chaetobrosicus anomalus* (Chaud.), found between 3000 m. and 3657 m., is localized in the drainage area of R. Jhelum, south of the main crest line of the Great Himalaya. Also localized in the same area are *Phaeropsophus stenoderus* Chaud. (Indo-Malayan) and *Pristonychus kashmirensis babaulti* Andr. The typical form *Pristonychus kashmirensis* Bates, found between 3300 m. and 4267 m., is localized in the Indus drainage area.

Bembidion has a total of 27 species and is also characterized by maximum species endemism. It is essentially a Holarctic genus, with only one or two species found in the lowlands of India, but several species are known from Finno-scandinavia, Alaska, and the far North. The Holarctic *Trechus*, of which several species are known from Turkestan mountains, is represented by three species in the NW. Himalaya. *Trechus cameroni bistriatus* Jeann., an endemite, is localized in the Chenab-Beas drainage area, south of the main crest line of the Great Himalaya. The typical form is known from the Simla Hills of the Garhwal Himalaya. The distribution of the non-endemic species of *Trechus* is shown in Fig. 14. It is interesting to observe that the Palaearctic *Harpalus*, which with one exception is restricted to the Himalaya in India, is strictly localized in the drainage areas of Jhelum and Chenab-Beas and is mostly found below an elevation of 4300 m. The subgenus *Nebria* (*Patronebria*), with one species *himalayica* (Bates), is also known from Garhwal, Kumaon, Bhutan, Tibet, and Siberia. Among the non-endemites, *Cymindis mannerhemi* Gebl., occurring between 4267 m. and 4520 m. and localized in the Indus drainage area, is also known from Pamir and central Asia. *Amara brucei* Andr., found at an elevation of 5300 m. in the Indus drainage area, is also reported to occur at an elevation 5030 m. near the Mt. Everest area in E. Himalaya. *Amara darjilingensis* Putz., found at about an elevation of 3200 m., is also known from Kumaon, Sikkim, Darjeeling, and Khasi Hills. *Amara himalaica* Bates, which occurs above an elevation of 3300 m., is reported at lower elevations from Simla Hills and Kumaon Himalaya (Fig. 15). Of the non-endemic *Bembidion* (Fig. 15), five species viz. *braculatum* Bates, *gagates* Andr., *hasurda* Andr., *nivicola* Andr.,

and *pluto* Andr., occur in other parts of the Himalaya, E. of the R. Sutlej. *Bembidion bucephalum* Net. and *Bembidion dardum* Bates are known from Turkestan mountains, *Bembidion himalayanum* Andr. and *Bembidion pamiricola* Lut. from Pamir, and *Bembidion satanus* Andr. from Hindukush. *Bembidion fuscicrus* Motsch. is widely distributed in Pamir, central Asia, Siberia, and western parts of N. America (Fig. 16).

The Palaearctic element is high and amounts to nearly 95.0% of the nival species known at present. *Calosoma* represents the Mediterranean element. The subspecies *Calosoma maderae auro-punctatum* (Herb.) is endemic but *Calosoma maderae indicum* Hope is also reported from the lowlands of India and Peshawar in Pakistan. *Calosoma maderae kashmirensis* Breun. occurs in Tibet also. *Phaeropsophus catoirei* (Dej.), *Phaeropsophus cosularis* (Schm. & Boeb.), *Phaeropsophus stenoderus* Chaud., and *Scarites predator* Chaud. comprise the Indo-Malayan forms, which are found mostly near the timber line and do not seem to occur above an elevation of 3500 m. *Bradytus apricarius* (Payk.), found in the Indus drainage area, is also known to occur in Pamir, Canada, and the President Range in the Nearctic Realm. The distribution of the genus *Bradytus* is shown in Fig. 17.

Of the 7 species of Dytiscidae so far known in the nival zones of the NW. Himalaya, 4 species are endemites. Six of the species are localized in the Indus drainage area and often occur at elevations ranging from 4267 m. to 4527 m. *Potamonectes (Potamonectes) griseostriatus* Deg. (Fig. 18), found in many localities in the NW. Himalaya, is also known from Europe, Siberia, and N. America.

In the Hydrophilidae, the only endemite is *Helophorus (Meghelophorus) aquaticus* Linn., occurring between 4175 and 4300 m. *Atracthelophorus frater* d'Orch., occurring at an elevation of 4724 m., represents at present the highest altitude record in the family. The wide distribution of the remaining non-endemic forms in the Tibetan Palaearctic is shown in Fig. 19. d'Orchymont (29) has briefly discussed the peculiarities of the distribution of the high altitude Hydrophilidae of Tibet and Himalaya.

The family Staphylinidae, with 32 species, representing about 16% of the total nival Coleoptera, stands next to Carabidae in abundance. All the species are Palaearctic and the species endemism is about 81%. Of the 26 endemites, 19 belong to the genus *Atheta*, of which there are also 3 other non-endemic forms. The five species *Atheta (Acrotona) fungi kashmirensis* (Gr.), *Atheta (Aloconota) iguensis*

Cam., *Atheta (Bessobia) submetallica* Cam., *Atheta (Dimetrotia) hutchinsoni* Cam., and *Atheta (Microdota) ladakiana* Cam. are mostly localized in the Indus drainage area and the remaining endemic species are localized in the Jhelum drainage area. The rest of the endemic species belong to the genera *Geodromicus*, *Lesteva*, *Ocyusa*, *Oxypoda*, *Philonthus*, *Pseudocyusa*, and *Tachinus*.

Among the non-endemic Staphylinidae, the distribution of the following species is interesting. *Aleochara (Coprochara) bilineata* Gyll., occurring at an elevation of 4870 m., is also known from Garhwal Himalaya, Caucasus, and Europe. *Atheta triangulum* (Kr.), a Mediterranean element, seems to be confined to elevations immediately above the timber line. Five species are found above an elevation of 4000 m. *Atheta (Dimetrotia) hutchinsoni* Cam., found at an elevation of 5600 m., represents the highest altitude at which any Coleoptera is known at present from the world.

The family Tenebrionidae is remarkable for the highest degree of species endemism in Coleoptera, viz. 100%. There are also two endemic genera, viz. *Bioramix* and *Chianalus*. All the species are Palaearctic forms. Outside the NW. Himalaya, the genus *Ascelosodis* is known from Pamir only. *Syachis* is represented by one species from Turkestan mountains and one species from Afghanistan. *Cyphogenia* is widely distributed in the steppes of Asia from Mongolia and China to Caspian Sea and has about eight species in Iran and Afghanistan. *Prosodes* is also found in Iran, Afghanistan, Baluchistan, and SE. Europe. *Blaps* is known from Palaearctic and south Palaearctic of Asia, African Mediterranean, E. and central Europe. It is also interesting to note that all the species are localized in the Indus drainage area. Two species of *Blaps*, *Cyphogenia plana* Bates and *Myatis quadraticollis* Bates, occur above an elevation of 4000 m.

Species endemism in Curculionidae is 75% and the Palaearctic elements amount to nearly 87%. The genus *Catapionus* (Fig. 20) is known from Japan, Semirjetschensk, Siberia, Altai, Thian Shan, Kasghar, Karakorum, Turkestan mountains, Sikkim, Tibet, Kurlien Islands, and Amur. The genus *Scepticus* is distributed (Fig. 20) in Kasghar, Turkestan Mountains, Altai, Japan, Okinawa, Formosa, and does not extend west of Turkestan. In the NW. Himalaya it is widely distributed in the areas drained by R. Indus, R. Jhelum, and Chenab-Beas system, both N. and S. of the main crest line of the Great Himalaya. *Blosyodes* represents the Indo-Malayan element. Among the non-endemic species, *Otiorrhynchus russicus* Stier. is known from Russia, and *Sitones calossus* Gyll. is known from central and S. Europe and

central and W. Asia. Most of the species occur immediately above the timber line but four species, which are all endemic, occur at elevations above 4000 m.

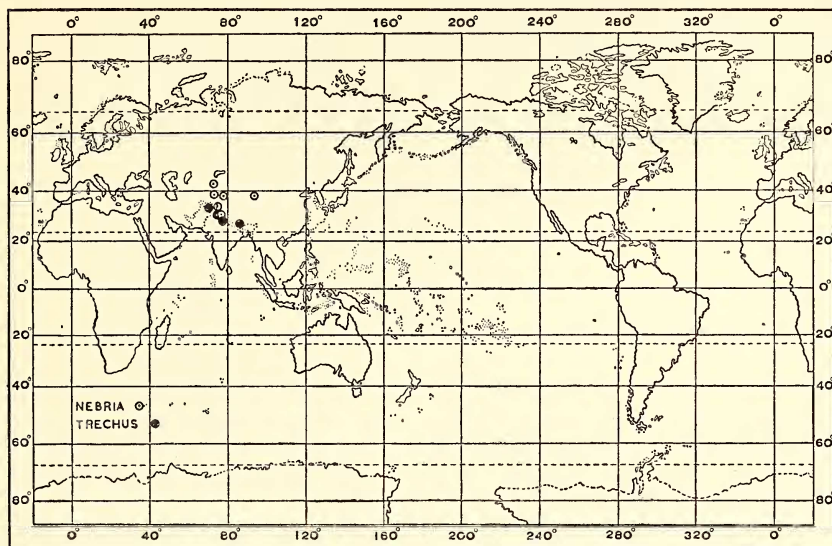


Fig. 14. The world distribution of the non-endemic nival species of *Nebria* and *Trechus* from the north-west Himalaya.

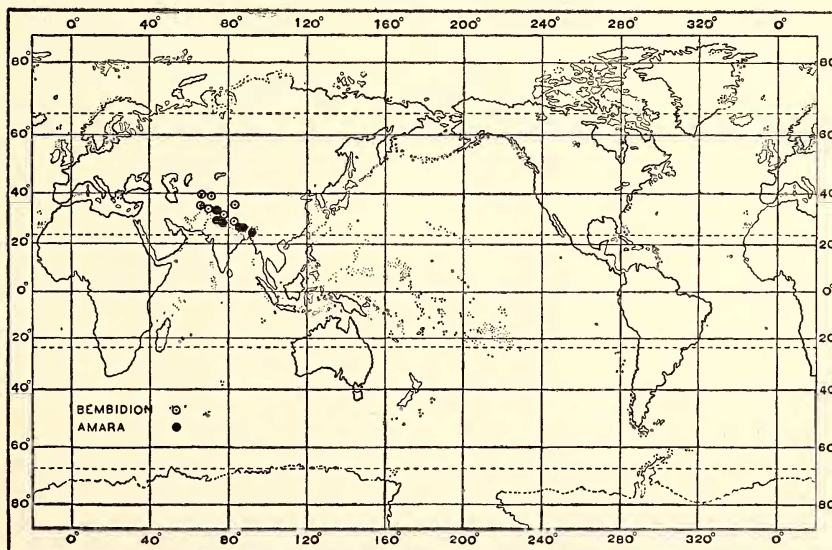


Fig. 15. The world distribution of the non-endemic species of *Amara* and *Bembidion* from the north-west Himalaya. The area of their endemism is confined to the Pamir-Tibet-north-west Himalaya region.

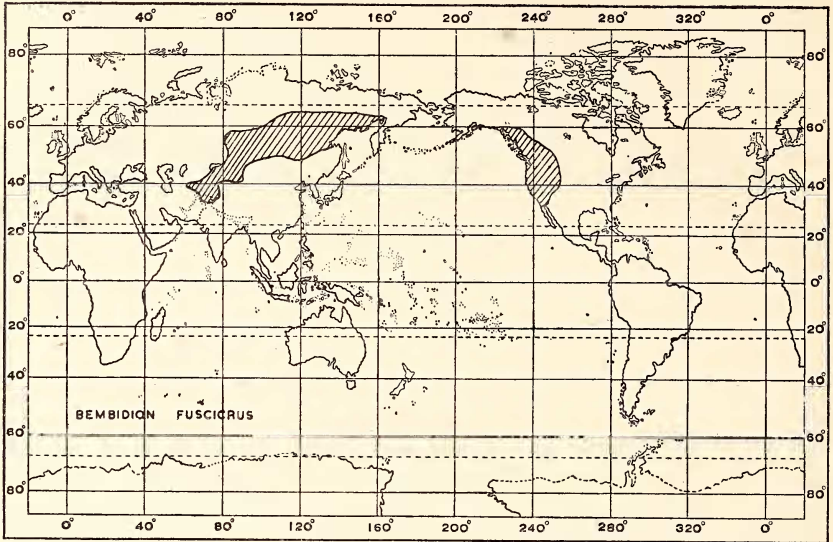


Fig. 16. The area (striped) of the world distribution of the interesting Holarctic species *Bembidion fuscicrus* (Motschulsky).

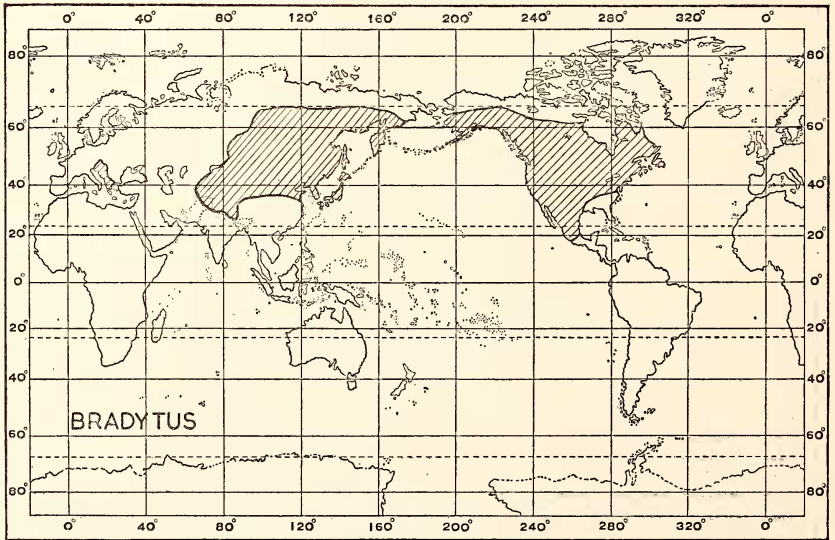


Fig. 17. The area (striped) of the world distribution of the genus *Bradytus*.

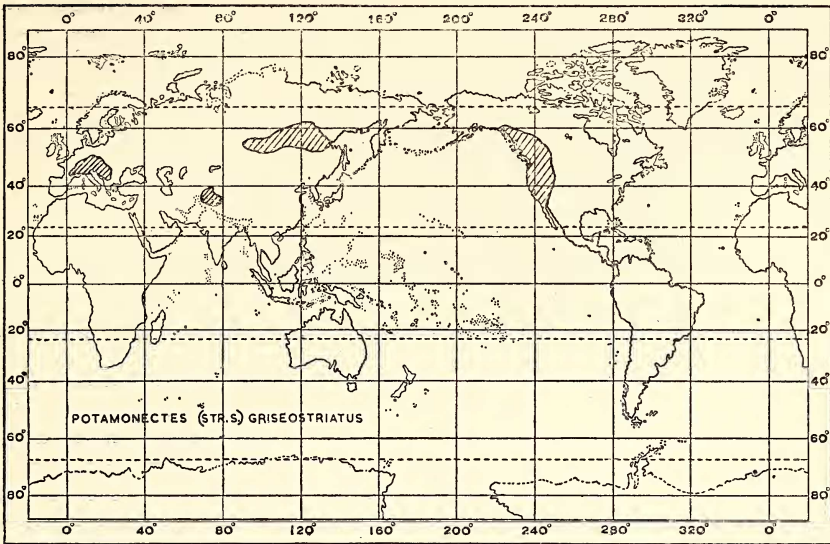


Fig. 18. The area (striped) of the world distribution of *Potamonectes (Potamonectes) griseostriatus* Deg.

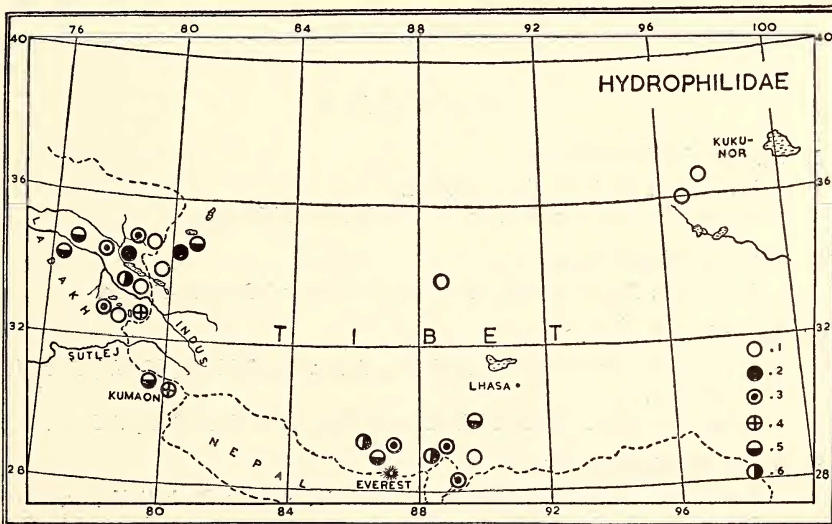


Fig. 19. The world distribution of the nival Hydrophilidae from the north-west Himalaya, modified from d'Orchymont (29). 1. *Helophorus (Lihelophorus) ser* Zait. 2. *Helophorus (Meghelophorus) aquaticus* Linn. 3. *Helophorus (Helophorus) splendidus immaensis* d'Orchymont. 4. *Helophorus (Atracthelophorus) frater* d'Orchymont. 5. *Helophorus (Atracthelophorus) montanus* d'Orchymont. 6. *Laccobius (Laccobius) hingstoni* d'Orchymont.

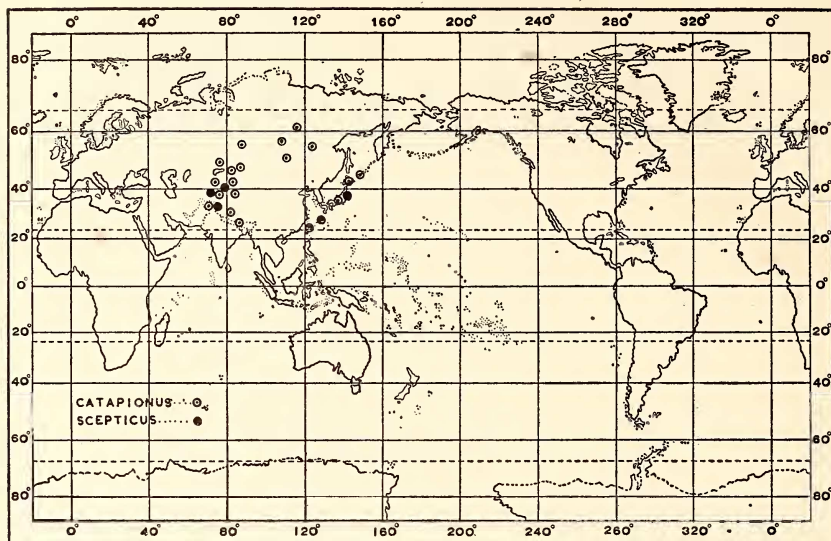


Fig. 20. The world distribution of the non-endemic nival species of *Catapionus* and *Scepticus* from the north-west Himalaya.

Cicindelidae

1. *Cicindela sublacerata balucha* Bates

Localities : Skardu 3000 m.
Other Distribution : Baluchistan.

Carabidae

2. *Agonum ladakense* Bates

Localities : Kashmir about 3000 m.
Other Distribution : Pamir ; Jalalabad; Tibet 3960 m.

*3. *Amara ambigene* Bates

Localities : Pangong Valley between Tanktze and Chagra, 4267 m.

4. *Amara brucei* Andr.

Localities : Ororotse Tso 5300 m., Anem La 5181 m., Tso-Nyak region 4350 m.
Other Localities : Second Mt. Everest Expedition Base Camp 5030 m.

5. *Amara darjilingensis* Putz.

Localities : Jalori Pass 3290 m., Dharmsala, Naggur, Parbati Valley.
Other Distribution : Kumaon, Sundardhunga Valley, Sukha Tal, Gori Valley, Bhurphu, Chuli Khad (Chakrata), Sikkim, Darjeeling, Lachung, Khasi Hills.

*6. *Amara depilatus* (Bates)

Localities : Goorais Valley, Skardu about 3000 m.

7. **Amara himalaica** Bates
Localities : Dras 3100 m., Kargil 2740 m., Leh 3437 m., Sumdeo 3300 m.,
Bashahr (Poo) 2800 m.
Other Distribution : Simla Hills, Kotgarh, Matiana, Almora, Ranikhet.
- *8. **Amara lamia** Andr.
Localities : Leh 3440 m., Tso-Morari 4664 m.
9. **Amara nila** Andr.
Localities : Manikaran, Pulga, Tchary-Djoni, Tsho-ti 3200 m., Kulu, Kandy,
Kote, Bajaura, Chamba.
Other Distribution : Mussoorie, Pindar Valley, Sundardhunga Valley,
Konain, Chitri Khud.
- *10. **Amara tiruka** Andr.
Localities : Sonemarg 3000 m., Leh 3440 m.
- *11. **Amolops piliferus** (Bates)
Localities : Goorais Valley, Skardu 3000 m., Murree.
- *12. **Anchomenus bernardi** Andr.
Localities : Gondhla 3200 m., Keylang 3300 m., Sisu 3300 m., Pulga,
Tchary-Djoni, 3200 m., Manikaran, Kulu, Kote, Parbati Valley.
13. **Anchomenus ladakensis** Bates
Localities : Leh 3440 m., Kargil 2740 m., Pangong Valley between Tanktze
and Chagra 4267 m.
Other Distribution : Tibet (Gyangtse) 3600 m.
14. **Anchomenus caesitius** Andr.
Localities : Sisu 3300 m., Sumdeo 3300 m., Kulu, Kandy, Kote.
Other Distribution : Almora.
- *15. **Bembidion ajmonis** Net.
Localities : Razdhainangan 3500 m.
- *16. **Bembidion algidum** Andr.
Localities : Gulmarg 2438-2743 m., Khilanmarg 3350 m.
- *17. **Bembidion aquilum** Andr.
Localities : Patseo 3500 m., Gond, Baltal 3000 m., Leh 3440, Mulbek 4520
m., Skardu, Gulmarg 2800 m.
- *18. **Bembidion atlanta** Andr.
Localities : Lianmarg 3050 m.
- *19. **Bembidion besoni** Andr.
Localities : Khilanmarg 3350 m., Razhainangan 3657 m.
20. **Bembidion braculatum** Bates
Localities : Skardu 3000 m., Matayan 3050 m.
Other Distribution : Kumaon, Gori River gorge, Laptel 4572 m., Milam in
Gori Valley 3500 m.

21. **Bembidion bucephalum** Net.

Localities : Chhota Deosi 3962 m., Boorgi Nullah 3657 m., Braldo Valley, Kro Brok 3700 m., Thla Brok 4267 m., Punmah Valley, Dumiltar 4267 m., Baltora, Urdukas 4080 m., Mundu 3960-5000 m., Lopsang Bransa 4578 m. All Kashmir.

Other Distribution : Turkestan, Bukhara, Transcaspia.

*22. **Bembidion caporoacoi** Net.

Localities : Sind Valley, Kangan 2000 m., Olthingthang 2618 m., Shigar Valley, Alchori, Kushumul all above 3000 m., Braldo Valley, Askole and Biah 3050 m.

23. **Bembidion dardum** Bates

Localities : Goorais Valley, Skardu 3000 m.

Other Distribution : Bukhara.

24. **Bembidion fuscicrus** Motsch.

Localities : Baltal 3000 m., Leh 3440 m., Mulbek 4420 m., Nurla, Salt Lake 3627, Tso-Morari 4541, Nima Mud 4267 m., Pangur Tso 4437 m., Tso-Nyak 4470 m.

Other Distribution : Central Asia, Siberia, Western States of North America.

25. **Bembidion gagates** Andr.

Localities : Gond 3050 m., Manikaran, Pulga, Keylang 3220 m., Patseo 3300 m., Sumdeo 3300 m., Kulu, Kote, Kangra.

Other Distribution : Upto eastern Kumaon.

26. **Bembidion hasurada** Andr.

Localities : Gulmarg 2800 m., Aphaarwat 4260, Kangan, Mulbek 4420 m., Pulga, Batote, Raman, Kulu.

Other Distribution : Simla Hills, West Almora, Chakrata.

27. **Bembidion himalayanum** Andr.

Localities : Patseo 3300 m., Kangra, Baijnath, Dharmasala, Triund, Jalori Pass 3280 m.

Other Distribution : Kurram Valley, Tibet.

*28. **Bembidion hutchinsoni** Andr.

Localities : Kyam 4734 m. (Edge of hot spring).

*29. **Bembidion irregularae** Net.

Localities : Gond 2440 m., Shaksagan Valley 3962 m., Tarim Basin 4572 m.

*30. **Bembidion ixion** Andr.

Localities : Matayan 3050 m.

*31. **Bembidion ladakense** Andr.

Localities : Mulbek 4420 m., Gond 3000 m., Baltal 3000 m., Sumdeo 3300 m., Khalatse 4572 m., Biah Valley, Bardumul 3362 m.

*32. **Bembidion ladas** Andr.

Localities : Nima Mud 4267 m., Tso-Morari 4541 m., Salt Lake 3627 m., Leh 3440 m., Mulbek 4420 m., Rango.

- *33. **Bembidion leve** Andr.
Localities : Mulbek 4420 m.
- *34. **Bembidion livens** Andr.
Localities : Khalatse 3048-3657 m.
- *35. **Bembidion luntaka** Andr.
Localities : Suru Basin 3050 m., Shimtsa 3200 m., Karboo, Parkutta, Tolti, Golskardu, Leh 3440 m., Mulbek 4520 m., Nurla, Baltal 3000 m., Sonemarg 3000 m., Nima Mud 4267 m., Keylang 3300 m., Sisu 3300 m., Zingzingbar 4267 m., Olthingthang 3140 m., Shigar Valley, Juno, Alchori, Kushumul 2440 m.
36. **Bembidion nivicola** Andr.
Localities : Daulad Begaldi near Karakoram Pass 4730 m.
Other Distribution : Mt. Everest Base Camp 4730 m.
37. **Bembidion pamiricola** Lutchnik.
Localities : Biaho Valley, Bardumul 3352 m.
Other Distribution : Pamir.
38. **Bembidion petrimagni** Net.
Localities : Deosi, Lal Pani 3962 m., Baltoro 4000-4800 m., Widukas 4327 m.
Other Distribution : Pamir.
- *39. **Bembidion pictum** (Fald.).
Localities : Leh 3440 m., Mulbek 4420 m., Nurla, Baltal 3000 m., Lac Sale 3627 m., Tso-Morari 4541 m., Nima Mud 4267 m.
40. **Bembidion pluto** Andr.
Localities : Nima Mud 4267 m., Tso-Morari 4541 m., Salt Lake 3627 m., Leh 3440 m., Tangyar 4430 m., Lukung 4267 m., Igu 3637 m.
Other Distribution : Kumaon.
41. **Bembidion satanas** Andr.
Localities : Goorais Valley 2133 m., Gulmarg 2590 m., Liddar Valley 2743 m., Gond, Kolahoi 3360 m.
Other Distribution : Chitral.
42. **Bradytus apricarius** (Payk.)
Localities : Sind Valley, Sonemarg 3000 m., Dras 3100 m., Kargil 2740 m., Leh 3440 m.
Other Distribution : Between Sirikol and Panga, Canada, President Range (America).
- *43. **Calathus kollari** Putz.
Localities : Sumdeo 3400 m., Pulga, Manikaran, Tchary-Djoni 3200 m., Bajaura, Kulu, Kote, Kandy, Baltal 3000 m.
- *44. **Calosoma maderae auropunctatum** (Herb.)
Localities : Kulu, Sumdeo 3400 m., Patseo 3300 m., Keylang 3200 m., Cimur 3300 m., Rohtang Valley 3900 m., Chamba, Sonemarg, Kogyar, Sind Valley, Dras 3100 m., Kargil 2740 m., Leh 3440 m.

45. *Calosoma maderae indicum* Hope
 Localities : Pulga, Tho-ti 3200 m., Manikaran, Gond, Srinagar.
 Other Distribution : Peshawar, Taru, Kohat, Calcutta, Pusa (Bihar),
 Chapra, Dehra Dun.
46. *Calosoma maderae kashmirensis* Breun.
 Localities : Kashmir, Kulu, Rohtang Valley 3900 m., Sumdeo 3300 m.
 Other Distribution : Tibet 4000 m.
47. *Clivina tenuelimbatus* Ball.
 Localities : Goorais Valley, Leh 3440 m.
 Other Distribution : Turkestan.
- *48. *Carabus (Imaibius) barysomus* (Bates)
 Localities : Goorais Valley, Pir Panjal, Batote 2440-3050 m., Hazara,
 Lower Kagan Valley, Shran.
49. *Carabus (Imaibius) boysi* Tatum.
 Localities : Sonemarg 3000 m., Kulu, Kani, Chamba, Pulga, Tchary-Djoni
 3200 m., Tsho-ti 3200 m.
 Other Distribution : Simla, Garhwal, Mundali, Deoban, Bodyar, West
 Almora, Dhudatoli and Sundardhunga Valley.
- *50. *Carabus (Imaibius) dardiellus granulisparsus* Bates.
 Localities : Goorais Valley, Pir Panjal south of Srinagar 2440-3050 m.,
 Jhelum Valley, Gulmarg 2750 m.
- *51. *Carabus (Imaibius) epipleuralis* Sem.
 Localities : Mountains west of Pir Panjal and north of Poonch 3000-
 3500 m.
- *52. *Carabus (Imaibius) rostianus* Sem.
 Localities : North-east of Islamabad 1828 m., Songam Dusu, south-east
 of Islamabad 1828-3050 m., Liddar Valley, Tanin 2750 m.
53. *Carabus (Imaibius) stoliczkanus* Bates
 Localities : Mountains west of Pir Panjal 1820-3050 m., Murree.
 Other Distribution : Campbellpore.
- *54. *Chaetobrosicus anomalus* (Chaud.)
 Localities : Sisu 3200 m., Rohtang Valley 3900 m., Shishramnag 3657 m.,
 Khilanmarg 3050 m., Lidarwat 2750 m., Jalori Pass 3300 m., Tragbal Pass
 3300 m., Chamba, Dalhousie.
55. *Chlaenius caeruleus* (Stev.)
 Localities : Mulbek 4420 m., Goorais Valley, Srinagar, Seraj.
 Other Distribution : Baluchistan, Armenia, S. Russia.
- *56. *Chlaenius tenuelimbatus* Ball.
 Localities : Leh 3440 m.
- *57. *Cymindis altica* Gebl.
 Localities : Between Dras and Leh 3100-3440 m.
- *58. *Cymindis babaulti* Andr.
 Localities : Leh 3440 m.

59. *Cymindis championi* Andr.
Localities : Tso-Nyak 4357 m.
Other Distribution : Northern Kumaon, Tibet.
- *60. *Cymindis glabella* Bates
Localities : Baltal 3000 m., Ladakh 3200 m.
61. *Cymindis mannerheimi* Gebl.
Localities : Baltal 3000 m., Mulbek 4520 m., Pangong Valley 4267 m.,
Tangyar 4470 m.
Other Distribution : Pamir, Tarabagtai Mountains, Issyk-kul, all central
Asia.
- *62. *Cymindis rubriceps* Andr.
Localities : Anem La 5181 m.
- *63. *Dyschirius ladakensis* Andr.
Localities : Ladakh 3500 m.
- *64. *Harpalus amarellus* Bates
Localities : Kangra, Bajaura, Mandi, Naggar, Cimur 3300 m., Keylang
3200 m., Sumdeo 3300 m., Sisu 3200 m.
65. *Harpalus melaneus* Bates
Localities : Baltal 3000 m., Sonemarg, Rohtang Valley 3900 m., Kote,
Pulga, Sumdeo 3300 m., Zingzingbar 4267 m., Patseo 3770, Sisu 3200 m.,
Keylang 3300 m. Gondhla 3200 m., Cimur 3300 m., Chamba, Murree,
Dalhousie.
Other Distribution : Mundali, Dehra Dun, Almora.
66. *Harpalus quadricollis* (Redt.)
Localities : Sisu 3200 m., Zingzingbar 4267 m., Patseo 3770 m., Sumdeo
3300 m., Keylang 3300 m., Pulga, Baltal.
Other Distribution : Rawalpindi, Kumaon.
67. *Hypsinephus ellipticus* Bates
Localities : Baltal 3000 m., Pangong Valley 4267 m.
Other Distribution : Supi River (Tibet).
- *68. *Leistus nivium* Andr.
Localities : Dusu, Sintan Pass 3000 m.
69. *Liocnemis himalaica* Bates
Localities : Sumdeo 3200 m., Sonemarg 3000 m.
Other Distribution : W. Almora.
- *70. *Metabletus tartarus* Bates
Localities : Patseo 3770 m., Sind Valley.
71. *Nebria limbiger*a Solsky
Localities : Tso-Morari 4541 m., Nima Mud 4267 m., Zingzingbar 4267 m.,
Mulbek 4420 m., Kargil 2740 m.
Other Distribution : Kumaon, Turkestan, Kokand, Alai Mountains, Pamir,
China : Monpin.

- *72. *Nebria limbiger* *babaulti* Andr.
Localities : Baltal 3000 m., Mulbek 4420 m.
73. *Nebria (Patronebria) himalayica* (Bates)
Localities : Goorais Valley, Skardu 3000 m., Parbati Valley, Bashahr (Poo).
Other Distribution : Almora, Milam in Gori Valley, 3500 m., Khedar Khud (Chakrata Division).
- *74. *Pardileus indicus* (Bates)
Localities : Pulga, Tsho-ti, Tchary-Djoni 3200 m., Bajaura, Kulu, Kandi, Kangra.
75. *Phaeropsophus catoirei* (Dej.)
Localities : Bajaura, Kulu, Naggar, Mandi, Gharry, Baltal 3000 m.
Other Distribution : Ceylon, Burma, Andaman Island.
76. *Phaeropsophus consularis* (Schm. & Boeb.)
Localities : Gharry 3000 m., Kangra.
Other Distribution : Dehra Dun, Ranikhet, Chhota Nagpur, Konbir, Chapra, Sardah, Dacca, Assam, Silonibari, Sibsagar, Siliguri, Surada, Karen Hills, Bharno.
- *77. *Phaeropsophus stenoderus* Chaud.
Localities : Gharry 3000 m., Bajaura.
78. *Pristonychus kashmirensis* Bates
Localities : Goorais Valley, Liddar Valley, Khilanmarg 4000 m., Gulmarg 2750 m., Sintan, Pir Panjal, Upper Mundag, Kulu.
Other Distribution : Simla.
- *79. *Pristonychus kashmirensis babaulti* Andr.
Localities : Tsho-ti, Tchary-Djoni 3200 m., Pulga, Sisu 3200 m., Gondhla 3200 m., Keylang 3300 m., Sumdeo 3300 m. Rohtang Valley 3900 m., Kote, Kandy, Sonemarg 3000 m.
80. *Scarites praedator* Chaud.
Localities : Gharry, Baltal 3000 m., Sonemarg 3000 m.
Other Distribution : Sikkim, Assam, Bangla, Bihar, Orissa, Punjab, Bombay, Kodaikanal, Nilumbur, Burma, Rangoon.
81. *Tachys octostriatus* Net.
Localities : Sind Valley, Kangan, Suru Basin 3000 m., Kargil 2740 m.
Other Distribution : Sangla 2440 m., (east of Sutlej Valley in Bashahr).
82. *Trechus cameroni* Jeann.
Localities : Rohtang Pass 4150 m., Jalori Pass 3280 m.
Other Distribution : Simla Hills ; Narkanda 2800 m., Throch 3050 m.
- *83. *Trechus cameroni bistriatus* Jeann.
Localities : Kareri Lake 3050 m.
84. *Trechus indicus championi* Jeann.
Localities : Pulga, Cimur 3300 m., Baltal 3000 m., Sonemarg 3000 m., Dharamsala, Mandi.

Other Distribution : Simla, Darjeeling, Gopalda, Ranikhet, Nainital, Almora, Sikkim, Gumti Valley.

- *85. **Trichocellus roborowskii** Tchitch.
Localities : Baltal 3000 m., Leh 3440 m., Lac Sale, Nima Mud 4267 m.

Dytiscidae

86. **Dytiscus nitidus** Fab.
Localities : Dras 3100 m., Kargil 2740 m., Leh 3440 m.
Other Distribution : Central Europe.
- *87. **Coelambus flaviventris** Motsch.
Localities : Thongmon Tso above 4000 m.
88. **Potamonectes (Potamonectes) griseostriatus** Deg.
Localities : Kashmir, Ladakh, Digar Polu 3960 m., Kangral, Spring below Fotu La, Chushul 4340 m., Tso Kar 4527 m., Ghulam Bagh, Pangong Valley.
Other Distribution : East Europe, Siberia, N. America.
- *89. **Agabus (Anagabus) jucundus** Guignot
Localities : Kargil about 3000 m.
- *90. **Agabus (Dichonectes) nitidus** F.
Localities : Sonemarg 3000 m., Dras 3100 m., Kargil 2740 m., Nima 4267 m., Digar Polu 3960 m., Bao-Shaple 4570 m.
- *91. **Agabus (Gaurodytes) adustus** Guignot
Localities : Chushul 4336 m.
92. **Rahntus pulverosus** Steph.
Localities : Ladakh, Sonemarg 3000 m., Kangan, Ghulam Bagh, Srinagar.
Other Distribution : Europe, North Africa, Asia, Australia, Sunda Isles.

Hydrophilidae

93. **Helophorus (Atracthelophorus) frater** d'Orch.
Localities : Kashmir, Tso-Morari 4541 m.
Other Distribution : Laptel, 4572 m., border of Tibet and Kumaon, Sangchar 4724 m.
94. **Helophorus (Helophorus) splendidus immaensis** d'Orch.
Localities : Bai 4616 m., Kyam (Valley of R. Chang Chenmo) 4725 m., Sta-rtsk-puk-Tso (Tso Bar) 4538 m.
Other Distribution : Central Tibet : Phar, Kampe, Dshong 4420 m., Lingka 4420 m., Tingri 4572 m.
95. **Helophorus (Atracthelophorus) montanus** d'Orch.
Localities : Fotu La 3720 m.
Other Distribution : Western Tibet : Sulphur spring of Lake Mangzka 5400 m., central Tibet : Tingri 4572 m., Lingka and Shekka 4420 m., Gyantse 3962 m., Tibet-Kumaon-Border Laptel 4572 m., outside Tibet also from Aulie Ata on Syr-Daya.

96. **Helophorus (Lihelophorus) ser** Zaitzera
 Localities : Kyam in Chang Chenmo Valley 4725 m., Chushul south of Pongong Tso 4300 m.
 Other Distribution : Western Tibet : 50 kilometres east of Pongong Tso. Central Tibet : 4863 m., Eastern Tibet : The region of Kuku-Nor, Mang Tso 4429 m.
- *97. **Helophorus (Meghelophorus) aquaticus** Linn.
 Localities : East of Mugleb and between Mugleb and Tanktze 4175 m., north of Pongong Tso.
98. **Hydrous pallidipalpus** M'Leay
 Localities : Kashmir 3000 m.
 Other Distribution : Tibet 3900 m., Burma, China, Japan, Formosa, Sumatra and Java.
99. **Laccobius (Laccobius) hingstoni** d'Orch.
 Localities : Chushul south of Pongong Tso 4336 m.
 Other Distribution : C. Tibet : Kampa, Dshong 3200 m., Tingri 4572 m.

Histeridae

- *100. **Hister indicola** Desb.
 Localities : Pulga, Kulu, Kandi, Keylang 3300 m., Sumdeo 3300, m., Sisu 3200 m.
101. **Hister pullatus** Erich.
 Localities : Manikaran, Gharry about 3000 m.
 Other Distribution : Badia, Bilaspur, Dahora.

Staphylinidae

102. **Aleochara (Coprochara) bilineata** Gyll.
 Localities : Tsak Shang above Tso-Morari 4870 m.
 Other Distribution : Chakrata, Dehra Dun, Simla Hills, Europe, Caucasus.
103. **Aleochara (Mesochara) inornata** Cam.
 Localities : Jalori Pass 3300 m.
 Other Distribution : Chakrata, Deoban, Dehra Dun, Kumaon, Nainital, West Bhalkot.
- *104. **Atheta (Acrotona) funji kashmirensis** (Gr).
 Localities : Askole (Braldo Valley) 3100 m., Shimtsa (Punmah) 3200 m.
- *105. **Atheta (Acrotona) inequinata** Cam.
 Localities : Gulmarg 3050 m.
- *106. **Atheta (Aloconota) iguensis** Cam.
 Localities : Igu 3380 m.
- *107. **Atheta (Aloconota) morosa** Cam.
 Localities : Gulmarg 3050 m.

- *108. *Atheta (Bessobia) submetallica* Cam.
Localities : Tsak-Shang 4870 m.
- *109. *Atheta (Datomicra) sordiduloides* Cam.
Localities : Gulmarg 3050 m.
- *110. *Atheta (Datomicra) subarenicola* Cam.
Localities : Gulmarg 3050 m.
111. *Atheta (Dimetrota) adjacens* Cam.
Localities : Gulmarg 3050 m.
Other Distribution : Kotgarh, Narkanda.
- *112. *Atheta (Dimetrota) associata* Cam.
Localities : Gulmarg 3050 m.
- *113. *Atheta (Dimetrota) hutchinsoni* Cam.
Localities : Marsimik La 5600 m., Ororotse 5300 m.
- *114. *Atheta (Dimetrota) nigrans* Cam.
Localities : Gulmarg 3050 m.
- *115. *Atheta (Dimetrota) suballocera* Cam.
Localities : Gulmarg 3050 m.
116. *Atheta (Liogluta) subumbonata* Cam.
Localities : Gulmarg 3050 m.
Other Distribution : Chakrata, Deoban 2800 m.
- *117. *Atheta (Microdota) amiculoides* Cam.
Localities : Gulmarg 3050 m.
- *118. *Atheta (Microdota) gracillima* Cam.
Localities : Gulmarg 3050 m.
- *119. *Atheta (Microdota) ladakiana* Cam.
Localities : Tsak-Shang, above Tso-Morari 4870 m.
- *120. *Atheta (Microdota) subluctuosa* Cam.
Localities : Gulmarg 3050 m.
- *121. *Atheta (Oreostibia) nimbicola* Cam.
Localities : Apharwat 3960 m., Gulmarg 2743 m.
- *122. *Atheta nigrolucens* Cam.
Localities : Gulmarg 3050 m.
- *123. *Atheta (Paraloconota) jaloriensis* Cam.
Localities : Jalori Pass 3280 m., Bhabu Pass 2743 m.
- *124. *Atheta (Paraloconota) musicola* Cam.
Localities : Gulmarg 2433 m., Khilanmarg 3050 m., Kulu, Naggar.
125. *Atheta triangulum* (Kr.)
Localities : Gulmarg 2433-3050 m.
Other Distribution : Simla Hills, Gahan, Europe, Asia Minor.

- *126. *Geodromicus affinis* Cam.
Localities : Kargil about 3000 m.
- *127. *Lesteva kargilensis* Cam.
Localities : Kargil about 3000 m.
- *128. *Ocyusa (Cousya) quadrisulcata* Bernh.
Localities : Baltora, Mondu 4300 m., Urdukas 4000 m., Lopsang Bransa 4500 m., Liligo 3800 m., Biaho-tal, Paju 3400 m.
129. *Oxygoda (Podoxya) nigrita* Cam.
Localities : Jalori Pass 3280 m., Jibhi, Seraj 1828 m., Gulmarg.
Other Distribution : Kumaon, Chakrata, Simla Hills.
- *130. *Philonthus diversus* Schub.
Localities : Sintan, Shishram Nag, Liddar Valley 3657 m.
- *131. *Philonthus himalayicus* Bernh.
Localities : Kulu 3050 m.
- *132. *Pseudocyusa kashmirica* Cam.
Localities : Gulmarg, Khilanmarg 3050 m.
- *133. *Tachinus beelsoni* Cam.
Localities : Khilanmarg 3352 m.

Cantharidae

134. *Cantharis biocellata* Fair.
Localities : Karakoram 4000 m.
Other Distribution : Tibet 3900 m., North India, Hindukush.

Meloidae

135. *Mylabris phalerata* (Pall.)
Localities : Lakka Pass 3657 m., Dharmasala, Dalhousie, Kulti Nal 3657 m.
Other Distribution : Throughout India.

Elaeteridae

136. *Comsolacon aequalis* Cand.
Localities : Kashmir 3352 m.
Other Distribution : Wama (Afghanistan).

Coccinellidae

137. *Coccinella septempunctata* Linn.
Localities : Throughout Himalaya up to 4270 m.
Other Distribution : India, Europe.

138. *Thea bisoetonata* Muls.

Localities : Dhaula Dhar 4270 m.

Other Distribution : Indian plains, Egypt, Eritrea, Arabia, Palestine, Cape Verde Isles.

Tenebrionidae

*139. *Ascelosodis assimilis* Bates

Localities : Dras 3100 m., Kargil 2740 m., Leh 3440 m.

*140. *Ascelosodis ciliatus* Bates

Localities : Dras, Kargil, Leh, 3000-3450 m.

*141. *Ascelosodis grandis* Bates

Localities : Dras, Kargil, Leh, 3000-3450 m.

*142. *Ascelosodis intermedius* Bates

Localities : Dras, Kargil, Leh, 3000-3450 m.

*143. *Bioramix ovalis* Bates

Localities : Dras, Kargil, Leh, 3000-3450 m.

*144. *Bioramix puncticeps* Bates

Localities : Dras, Kargil, Leh, 3000-3450 m.

*145. *Blaps ladakensis* Bates

Localities : Tangtze to Chagra, Pangong Valley 4267 m.

*146. *Blaps perlonga* Bates

Localities : Tangtze to Chagra, Pangong Valley 4267 m.

*147. *Chianalus costipennis* Bates

Localities : Dras, Kargil, Leh, 3000-3450 m.

*148. *Cyphogenia plana* Bates

Localities : Dras, Kargil, Leh 3000-3450 m., Pangong Valley 4267 m.

149. *Myatis quadriticollis* Bates

Localities : Between Leh and Yarkand.

Other Distribution : Yarkand.

*150. *Opatrum ochthebiodes* Fauvel

Localities : Dras, Kargil, Leh, 3000-3450 m.

*151. *Prosodes trisulcata* Bates

Localities : Dras, Kargil, Leh 3000-3450 m.

*152. *Syachis ajmonis* Bates

Localities : High valleys of Kashmir, Dras, Kargil, Leh, 3000-3450 m.

*153. *Syachis cugiae* Gridelli

Localities : High valleys of Kashmir, 3000-3450 m.

- *154. *Syachis himalaicus* Bates
Localities : Dras, Kargil, Leh 3000-3450 m.
- *155. *Syachis picicornis* Bates
Localities : Dras, Kargil, Leh 3000-3450 m.

S c a r a b a e i d a e

156. *Onthophagus gibbosus* (Scriba)
Localities : River Sutlej, Tibet-Indian frontier, 3050 m.
Other Distribution : Turkestan, Persia, Asia Minor, Europe.
157. *Onthophagus sutlejensis* Splich.
Localities : Rajpur, Rampur, River Sutlej, Indian-Tibet frontier 3050 m.,
Bashahr.
Other Distribution : Wama, Nuristan (Afghanistan).
158. *Onthophagus tibetanus* Arrow
Localities : Khilanmarg 3050 m.
Other Distribution : Chaksam (Tibet) 3657 m., Brahmaputra Valley,
Gyangtse 3962 m., U.P. : Dhauliganga Valley, Almora 3220 m.

G e o t r u p i d a e

- *159. *Geotrupes kashmirensis* Sharp
Localities : Dras, Kargil, Leh 3000-3450 m.

A p h o d i d a e

- *160. *Aphodius kashmirensis* Sharp
Localities : Dras, Kargil, Leh 3000-3450 m.

R u t e l i d a e

- *161. *Adoretus ladakensis* Ohaus.
Localities : Ladakh 3450 m., Murree.
162. *Callistopopillia iris* (Cand.)
Localities : Ladakh 3450 m.
Other Distribution : Tibet, Yatong 3200 m., Sikkim, Kurseong, Mungphu.

C e r a m b y c i d a e

163. *Apatophysis kashmiriana* Sem.
Localities : Kashmir about 3000 m.
Other Distribution : Punjab, W. Tibet 3900 m.
164. *Clytus monticola* Gahan
Localities : Kashmir about 3000 m.
Other Distribution : W. Tibet 3900 m.

- *165. **Leptura rubriola** Bates
Localities : Murree, Gulberg, Liddar 3350 m.
166. **Purpuricenus montanus** White
Localities : West Kashmir about 3000 m.
Other Distribution : Campbellpore, W. Tibet 3900 m., outer Himalaya.

C h r y s o m e l i d a e

167. **Galeruca sexcostata** Jacoby
Localities : Liddar 3350 m., Srinagar, Burzil Chauki 3350 m.
Other Distribution : Lahore.
- *168. **Leptosonyx octocostatus** Weise
Localities : Khalatse 4572 m.
169. **Longitarsus cyanipennis** Bryant
Localities : Lahaul 3200 m.
Other Distribution : Kumaon, Surju Valley, Almora 2743 m., Nainital, Darjeeling, Gopaldhara.
170. **Merista quadrifasciata** (Hope)
Localities : Ladakh 3450 m., Kashmir, Kangra Valley 1370 m., Abbottabad, Murree.
Other Distribution : Bhimtal 4500 m., Almora 1670 m., Nainital, Simla, Ranikhet, Muktesar, Jeolikot, Mussoorie, Dehra Dun, Nepal : Gowchar, Gopaldhara, Pharping, Mungphu, Rungbong Valley.

C u r c u l i o n i d a e

- *171. **Achlaenomus babaulti** Hustache
Localities : Leh 3450 m., frontier of Tibet, Lac Sale 3657 m., Tso-Morari 4541 m.
- *172. **Achlaenomus squamulosus** Hustache
Localities : Patseo 3400 m., Zingzingbar 4267 m., Sisu 3200 m., Rohtang Valley 3900 m., Kote, Kashmir.
173. **Blosyroides pubescens** Marshall
Localities : Sisu 3200 m., Rohtang Valley 3900 m., Kashmir : Jarji 3410 m., towards Gilgit.
Other Distribution : Baluchistan.
174. **Blosyroides variegatus** (Redt.)
Localities : Kashmir, Kangra, Bajaura, Tchary-Djoni 3200 m., Pulga, Gond.
Other Distribution : Mussoorie.
- *175. **Calmycterus distans** (Faust.)
Localities : Tchary-Djoni 3200 m., Pulga.
- *176. **Catapionus basilicus** Schnoh.
Localities : Koty, Gilgit, Tchary-Djoni, 3200 m.

- *177. **Heteronyx ferus** Faust.
Localities : Tchary-Djoni, Tsho-Ti 3200 m., Pulga.
- *178. **Heteronyx ferus loevior** Hustache
Localities : Sisu 3200 m., Rohtang Valley 3900 m.
- *179. **Legenolobus lineolatus** Hustache
Localities : Leh 3450 m., Nima Mud 4267 m., Tso-Morari 4541 m.,
Lac Sale 3627 m., Tibet Frontier.
- *180. **Leptomias marshalli** Hustache
Localities : Gondhla 3200 m., Keylang 3300 m., Sumdeo 3300 m.
- *181. **Leptomias scribicollis** Marshall
Localities : Kashmir, Tchary-Djoni 3200 m., Pulga.
- *182. **Otiorrhynchus ruscicus** Stieril.
Localities : Kashmir about 3000 m.
Other Distribution : Sirikol, Russia : Tchaar-Tasch.
- *183. **Rhyncolus himalayensis** Stebb.
Localities : Tchary-Djoni 3200 m., Manikaran, Bajaura.
- *184. **Scepticus nubifer** Faust.
Localities : Kargil 2740 m., Dras 3100 m., Leh 3450 m., Sisu, 3200 m.,
Keylang 3300 m., Pateseo 3400 m., Sumdeo 3300 m., Zingzingbar
4267 m., Baltal 3000 m., Sonemarg, Gond, Rupshu, Tso-Morari 4541 m.
- *185. **Sitones vergicolor** Faust.
Localities : Keylang 3300 m., Sumdeo 3300 m.
- *186. **Sitones callosus** Gyll.
Localities : Gondhla 3200 m.
Other Distribution : Central, South-West Europe, Mediterranean Region,
West and central Asia.

(To be continued)